

CLAIMS

What is claimed is:

1. An image printing apparatus, comprising:
 - at least one pair of feeding rollers disposed in pairs in a vertical direction at a predetermined interval to feed a sheet of recording paper picked up by a pickup roller along a sheet feeding path;
 - a document position sensor to detect whether the sheet picked up by the pickup roller reaches a set reference position;
 - a storage unit to store information about the position of the sheet at which a white line would be produced, wherein the storage unit stores the information regarding sheet size;
 - a printing part to print an image as the sheet is fed into a printing area; and
 - a control unit to control a feeding rate of the feeding rollers using the information stored in the storage unit about the white line producing position of the sheet, wherein the sheet is fed at an initially set feeding rate starting when the sheet is detected to have reached the set reference position by the document position sensor until the white line would be produced, and the sheet is fed at a different feeding rate from the initially set feeding rate starting from the time when the white line would be produced on the sheet.
2. The image printing apparatus as claimed in claim 1, wherein the control unit stops driving the feeding rollers for a predetermined period of time starting from the time when the white line would be produced on the sheet.
3. The image printing apparatus as claimed in claim 2, wherein the control unit controls the feeding rate of the feeding rollers such that the sheet is fed at a feeding rate of the feeding rollers less than the initially set feeding rate for a predetermined period of time starting from the time when the white line would be produced on the sheet.
4. A white line compensation method of an image printing apparatus having a pickup roller, comprising:
 - storing information via a storage unit regarding sheet sizes of a sheet of paper and information in relation to position of the sheet of paper at which a white line would be produced;
 - feeding the sheet picked up by the pickup roller along a set sheet feeding path;

detecting whether the sheet reaches a set reference position; and
upon detecting that the sheet has reached the set reference position, controlling a sheet feeding rate by using the information in relation to a position of the sheet at which the white line would be produced depending on the sheet size information.

5. The white line compensation method as claimed in claim 4, wherein the control operation stops driving the feeding rollers for a predetermined period of time starting from the time when the white line would be produced on the sheet.

6. The white line compensation method as claimed in claim 4, wherein the control operation feeds the sheet at a feeding rate of the feeding rollers less than the initially set feeding rate for a predetermined period of time starting from the time when the white line would be produced on the sheet.

7. The image printing apparatus as claimed in claim 1, wherein the control unit determines via the document position sensor that the sheet reaches the set reference position and controls the sheet to be fed at an initially set feeding rate when the sheet is detected to have reached at the set reference position until the time when the white line would be produced.

8. An image printing apparatus in a multi-function machine, comprising:
an operating panel to support character and/or number inputs to enable various functions supported by the multi-function machine;
an interface unit to receive printing data transmitted from an external device;
a storage unit to store information in relation to a position at which a white line would be produced in accordance with the size of a sheet of paper;
a scanning unit to scan data printed on the sheet;
a control unit to check if information regarding the size of the sheet queuing to print is input through the input part, and upon determining that information on the size of the sheet is input, the control unit uses the size information to recognize a position of the sheet at which a white line would be produced; and
a sensor unit to detect operation states of individual peripheral devices in relation to the operations of the multi-function machine.

9. The image printing apparatus as claimed in claim 7, further comprising a facsimile unit, including:

a modem to receive and transmit facsimile data from and to external devices connected to a Public Switched Telephone Network; and

a Line Interface Unit to enable mutual communications between the modem and the Public Switched Telephone Network;

10. The image printing apparatus as claimed in claim 8, wherein the facsimile data received through the Public Switched Telephone Network is transmitted to the control unit via the modem and the Line Interface Unit.

11. The image printing apparatus as claimed in claim 7, further comprising a printing unit, including:

an ink cartridge to fire ink on the sheet;

a carriage return motor to drive the ink cartridge;

a line feed motor to transport the sheet to record print data;

a motor driver to drive the carriage return motor and the line feed motor according to the controls of the control unit;

a printer head that reciprocates to the left and to the right directions to carry out printing jobs;

a plurality of nozzles with discharge holes provided to the printer head;

a printer head driver to drive the printer head to fire ink via the nozzles.

12. The image printing apparatus as claimed in claim 11, further comprising:

a document position sensor to detect whether the sheet fed along a sheet feeding path reaches a set reference position; and

a control unit to drive the line feed motor.

13. The image printing apparatus as claimed in claim 12, wherein the control unit stops driving the line feed motor for a predetermined period of time starting from the time when the white line would be produced on the sheet.

14. The image printing apparatus as claimed in claim 12, wherein the control unit controls the line feed motor for a predetermined period of time starting from the time when the white line is produced on the sheet to feed the sheet at a rate less than an set initially feeding rate.

15. The image printing apparatus as claimed in claim 1, wherein the control unit predicts the time when the white line is produced on the sheet by using the sheet size information.

16. The image printing apparatus as claimed in claim 1, wherein the control unit continues to feed the sheet at the initially set feeding rate after the predetermined period of time lapses.

17. A white line compensation method of an image printing apparatus, comprising:
detecting whether a sheet of paper fed along a sheet feeding path reaches a set reference position;
driving the sheet along the sheet feeding path upon determining that the sheet has reached the set reference position in accordance with an initially set feeding rate; and
changing the initially set feeding rate for a predetermined period of time starting from a time when the white line would be produced on the sheet; and
jetting ink upon the sheet via an ink cartridge when the sheet reaches a printing area.

18. The white line compensation method as claimed in claim 11, further comprising stopping feeding of the sheet of paper for a predetermined period of time starting from the time when the white line would be produced on the sheet of paper.

19. The white line compensation method as claimed in claim 11, wherein after a predetermined period of time lapses, the sheet of paper is fed in accordance with the initially set feeding rate.